## CLAIMS

**[0059]** Though the invention has been described in reference to certain examples, optionally incorporating various features, the invention is not to be limited to the set-ups described. The invention is not limited to the uses noted or by way of the exemplary description provided herein. It is to be understood that the breadth of the present invention is to be limited only by the literal or equitable scope of the following claims.

**[0060]** That being said, we claim:

1. A method of optically scanning a sample in connection with a biopolymer array, said method comprising:

providing a biopolymer array;

performing a first automated scan of said sample, wherein at least some results of said scan are saturated to obtain a first set of non-saturated results; and

performing a second automated scan at a decreased sensitivity from said first scan to obtain a second set of non-saturated results.

2. The method of claim 1, wherein said first scan is performed at a scanning system maximum sensitivity.

3. The method of claim 1, wherein said second scan is performed with a sensitivity decreased between about 2 and 10 times that of said first scan.

4. The method of claim 1, further comprising:

determining if results from said first automated scan are saturated.

5. The method of claim 1, further comprising:

determining if results from said second automated scan are saturated.

6. The method of claim 1, further comprising:

performing a third automated scan with sensitivity decreased from said second scan.

7. The method of claim 6, further comprising:

determining if results from said third automated scan are saturated.

8. The method of claim 1, further comprising:

performing a third automated scan with sensitivity increased from said second scan, wherein said sensitivity is lower than that of said first scan.

9. The method of claim 8, further comprising:

determining if results from said third automated scan are saturated.

10. The method of claim 8, further comprising:

performing a fourth automated scan with a sensitivity increased from said third scan, wherein said sensitivity is lower than that of said first scan.

11. The method of claim 8, further comprising:

performing a fourth automated scan with a sensitivity decreased from said third scan, wherein said sensitivity is higher than that of said second scan.

12. The method of claim 1, wherein the biopolymer is selected from the group consisting of polypeptides and nucleic acids.

13. The method of claim 1, further comprising:

transmitting results obtained by said optical scanning from a first location to a second location.

14. The method of claim 13, where said second location is a remote location.

15. A method of optically scanning a sample in connection with a biopolymer array, said method comprising:

providing a biopolymer array;

performing a first automated scan of said sample;

determining if any from said first scan are saturated; and

terminating scanning if no results are saturated, or performing a second automated scan at a decreased sensitivity from said first scan if any results are saturated.

16. The method of claim 15, wherein said first scan is performed at a scanning system maximum sensitivity.

17. The method of claim 15, wherein said second scan is performed with a sensitivity decreased between about 2 and 10 times that of said first scan.

18. The method of claim 15, further comprising:

determining if results from said second automated scan are saturated.

19. The method of claim 15, further comprising:

performing a third automated scan with sensitivity decreased from said second scan.

20. The method of claim 19, further comprising:

determining if results from said third automated scan are saturated.

21. The method of claim 15, further comprising:

performing a third automated scan with sensitivity increased from said second scan, wherein said sensitivity is lower than that of said first scan.

22. The method of claim 21, further comprising:

determining if results from said third automated scan are saturated.

23. The method of claim 21, further comprising:

performing a fourth automated scan with a sensitivity increased from said third scan, wherein said sensitivity is lower than that of said first scan.

24. The method of claim 21, further comprising:

performing a fourth automated scan with a sensitivity decreased from said third scan, wherein said sensitivity is higher than that of said second scan.

25. The method of claim 15, wherein the biopolymer is selected from the group consisting of polypeptides and nucleic acids.

26. The method of claim 15, further comprising:

transmitting results obtained by said optical scanning from a first location to a second location.

27. The method of claim 26, where said second location is a remote location.

28. A method comprising that represented in figure 3A.

29. A method comprising that represented in figure 3B.

30. A system programmed to operate according to a method selected from a group of methods consisting of the optical scanning method of claims 1-29.

31. The system of claim 30 comprising at least one light excitation source and at least one fluorescence detector.

32. A computer-readable medium embodying a program to direct a machine to perform a method selected from a group of methods consisting of the optical scanning method of claims 1-29.

33. A computer-readable medium containing data representing sample results, wherein said data is made by a method selected from a group of methods consisting of the optical scanning method of claims 1-29.